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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/318,249	05/25/99	FURNAS	W 5298-18

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EXAMINER

LUU, J

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 11/08/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/318,249

Applicant(s)

FURNAS, WILLIAM J.

Examiner

Thanh X Luu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) ____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a. On page 1, lines 12-13, CIP application 09/026,311 is now U.S. Patent 6,031,221;
 - b. On page 2, lines 20 and 26, "pixel" and "imaged" are misspelled.Appropriate correction is required.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 8-9, "said CCD camera image means" lacks proper antecedent basis. In line 11, it is unclear in its given context what is varied in intensity. Further, "varying intensity between a minimum brightness level... and light on said light source illumination area at a rate of change.." does not seem to be comparing between two light levels. In line 13, "therebehind" is indefinite since it is unclear what it refers to.

In lines 14-15, what is "detected as a defect?" In line 17, "(one or more away)" is indefinite; Applicant is reminded that parenthesis should be avoided since it is unclear what should be included or excluded from the claim.

Regarding claim 3, lines 5 and 8, "said white" and "said white row" lack proper antecedent basis.

Claims 2 and 4-7 are indefinite by virtue of their dependency on an indefinite claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Juvinall et al. (U.S. Patent 4,601,395).

Regarding claim 1, Juvinall et al. disclose (see Figure 1) a machine for inspecting the wall of a bottle comprising: a conveyor (12, 18) for supporting a bottle at an inspection station, the inspection station including: (see Figure 2) a CCD camera (42) on one side of the conveyor having a camera image; a light source (52), having an illumination area, on the other side of the conveyor, for imaging the bottle on the CCD camera; means for defining a spatially cyclically continuously varying intensity (52, 48, 50, 57) between (see Figure 4A) a minimum brightness level that will permit the

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identification of a light blocking defect (62a) and a light level less than that is required to be detected as a defect; (see Figure 2) computer means (56) for analyzing the camera image by comparing neighboring pixels (see column 4, lines 65-68 and column 5, lines 1-5) alone or in combination to determine the rate of change in intensity to identify defects where the rate of change exceeds a defined value (see column 6, lines 20-68).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juvinall et al.

Regarding claim 2, Juvinall et al. disclose (see Figure 2) an incandescent light source (52). However, LEDs are notoriously well known in the art. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use rows of LEDs in the apparatus of Juvinall et al. in order to provide a more efficient device.

Regarding claim 3, Juvinall et al. disclose a cyclically continuous varying light intensity obtained with the rotation of the bottle and a light gradient. The configuration has with a diffuser plate (48) producing a minimum brightness (62a), an intermediate brightness (60a) and a white row (58a). Juvinall et al. not disclose using the light

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source to define light rows. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made provide the varying light rows as claimed in order to eliminate rotation of the bottle for faster operation.

Regarding claims 4 and 5, Juvinal et al. disclose (see Figure 4A) the intensity being uniformly reduced or increased from the white row to the minimum brightness area (62a, 60a, 58a).

Regarding claims 6 and 7, Juvinal et al. disclose (see Figure 4A) rows having brightness levels of approximately zero percent (62a), 50 percent (60a) and 100 percent (58a); the white row being remote from the minimum brightness row. The exact percentages would have been a matter of design choice. Further, it would require only routine skill in the art to choose brightness levels in the apparatus of Juvinal et al. to obtain a desired optimal detection result.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-0539. The examiner can normally be reached on Monday-Friday from 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seungsook Ham, can be reached on (703) 308-4090. The fax phone number for the organization where the application or proceeding is assigned is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl

October 31, 2000



Que T. Le
Primary Examiner